



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,375	07/13/2005	Jani Vare	006136.00005	3973
22907 7590 06/23/2010 BANNER & WITCOFF, LTD. 1100 13th STREET, N.W. SUITE 1200 WASHINGTON, DC 20005-4051				
EXAMINER				
CHOKSHI, PINKAL R				
ART UNIT		PAPER NUMBER		
2425				
MAIL DATE		DELIVERY MODE		
06/23/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,375

Applicant(s)

VARE ET AL.

Examiner

Pinkal R. Chokshi

Art Unit

2425

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 and 40-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 and 40-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed 04/14/2010, with respect to the rejection(s) of claim(s) 1-32 and 40-44 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made. See the new rejection below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 29-32** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim elements "means for discovering a mother table" and "means for interaction with a service provider" are a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function. In the Specification, paragraph 0038 and 0068 mentions discovering the service from the transport stream and interaction with service provider. However, it does not teach how it is being discovered and interacted.

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 41-44 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 41-44 are claiming "computer readable medium" that can be signals per se since the spec is silent on the description of CRM.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 6, 7, 9-12, 17-22, 25-29, 31, 32, and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,252,634 to Yuen et al (hereafter referenced as Yuen) in view of WO Publication 02/11328 to Ikeda et al. (hereafter US Patent 7,475,418 will be used as a certified translation).

Regarding **claim 1**, "a method comprising: establishing at least one service information table configured to enable an end user terminal to obtain transport streams transmitted over a digital broadcast network" reads on delivering the channel mapping information (service information) table, established at the physical host, that includes channel maps for all the television services offered by that physical host (col.3, lines 61-63; col.4, lines 19-26, 60-62) disclosed by Yuen and represented in Fig. 2.

As to "splitting, by a processor, the at least one service information table into sub-tables, wherein each sub-table identifies a certain transport stream, and

wherein said certain transport stream comprises a local transport stream of a certain cell" Yuen discloses (col.6, lines 1-61) that the channel mapping information generated by the physical host is divided into multiple blocks, where each block includes a channel map table (sub-table) for a specific zip code as represented in Figs. 5 and 6.

Yuen meets all the limitations of the claim except "establishing a mother table configured to maintain a sub-table of the certain transport stream and sub-tables of adjacent transport streams of the certain transport stream, wherein said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell." However, Ikeda discloses (col.7, lines 52-62) that the system controller generates link information (mother table), where link information shows the program that is being broadcast in the service area and the programs that are being broadcast in adjacent service areas as represented in Fig. 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen's system by creating a program table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 6**, "a method wherein at least one headend equipment for a cell of the digital broadcast network performs the step of splitting" Yuen

discloses (col.6, lines 1-30) that the cable company (head-end) is used to divide the table as represented in Fig. 6.

Regarding **claim 7**, "a method wherein an operator runs the at least one headend" Yuen discloses (col.6, lines 1-30) that the cable company (head-end) is used to divide the table as represented in Fig. 6.

Regarding **claim 9**, "a method further comprising building a local table based on the sub-table of the certain transport stream" Ikeda discloses (col.5, lines 27-32) that the transmitter transmits service list of the programs offered in the service area. In addition, same motivation is used as to reject claim 1.

Regarding **claim 10**, "a method wherein the mother table identifies an amount of the sub-tables" Ikeda discloses (col.7, lines 58-62) that the link information shows the program of one service area and the adjacent service areas. In addition, same motivation is used as to reject claim 1.

Regarding **claim 11**, "a method wherein the mother table identifies an updating of the sub-table" Ikeda discloses (col.4, lines 33-38; col.7, lines 52-62) that the system controller controls the operation of each transmitter by generating link information of service areas based on the location of receiver. In addition, same motivation is used as to reject claim 1.

Regarding **claim 12**, "a method further comprising the step of updating the adjacent transport streams periodically about the sub-table" Ikeda discloses (col.4, lines 33-38; col.7, lines 52-62) that the system controller controls the operation of each transmitter by generating link information of service areas based on the location of receiver. In addition, same motivation is used as to reject claim 1.

Regarding **claim 17**, "a method further comprising the step of performing a handover function for the transport streams when a mobile end user terminal is moving from a cell of the certain transport stream to any adjacent transport stream" Ikeda discloses (col.4, lines 33-38) that when the receiver moves from one service area to another service area, broadcasting being transmitted is switched from one transmitter to another as represented in Fig. 1. In addition, same motivation is used as to reject claim 1.

Regarding **claim 18**, "a method further comprising the step of performing a roaming function for the transport streams when a mobile end user terminal is moving from a cell of the certain transport stream to any adjacent transport stream" Ikeda discloses (col.4, lines 33-38) that when the receiver moves from one service area to another service area, broadcasting being transmitted is

switched from one transmitter to another to maintain communication as represented in Fig. 1. In addition, same motivation is used as to reject claim 1.

Regarding **claim 19**, "a method wherein the certain transport stream comprises a local transport stream of a cell of the digital broadcast network" Ikeda discloses (col.4, lines 12-23) that the broadcast transmitted from each transmitter is digital broadcast. In addition, same motivation is used as to reject claim 1.

Regarding **claim 20**, "a method wherein the transport streams comprise MPEG transport streams" Ikeda discloses (col.7, lines 5-8) that the transport stream conforming to the MPEG-2 system. In addition, same motivation is used as to reject claim 1.

Regarding **claim 21**, "a method wherein the transport stream comprises transmission according to Digital Video Broadcasting" Ikeda discloses (col.4, lines 8-11; col.6, lines 43-54) that the system uses digital video broadcasting. In addition, same motivation is used as to reject claim 1.

Regarding **claim 22**, "a method wherein the transport stream comprises a terrestrial digital video broadcasting (DVB-T)" Ikeda discloses (col.3, lines 58-66)

that the transmission occurs according to digital terrestrial broadcasts. In addition, same motivation is used as to reject claim 1.

Regarding **claim 25**, "a method comprising: establishing service information configured to enable at least one end user terminal to obtain a sub-table of the service information within broadcast transport streams" reads on delivering the channel mapping information (service information) table, established at the physical host, that includes channel maps for all the television services offered by that physical host (col.3, lines 61-63; col.4, lines 19-26, 60-62) disclosed by Yuen and represented in Fig. 2.

As to "wherein the service information is adapted to be split into sub-tables" Yuen discloses (col.6, lines 1-61) that the channel mapping information generated by the physical host is divided into multiple blocks, where each block includes a channel map table (sub-table) for a specific zip code as represented in Figs. 5 and 6.

Yuen meets all the limitations of the claim except "based on the sub-table, establishing a local table configured to announce at least one local transport stream of certain cell containing the service, wherein the local table is adapted to be delivered to the at least one end user terminal and the local table is adapted to identify the at least one local transport stream for an announcement to adjacent transport streams, wherein said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell." However,

Ikeda discloses (col.7, lines 52-62) that the system controller generates link information (local table), where link information shows the program that is being broadcast in the service area and the programs that are being broadcast in adjacent service areas as represented in Fig. 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen's system by creating a program table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 26**, "a method comprising: establishing service information tables, the service information tables configured to enable an end user terminal to obtain transport streams" reads on delivering the channel mapping information (service information) table, established at the physical host, that includes channel maps for all the television services offered by that physical host (col.3, lines 61-63; col.4, lines 19-26, 60-62) disclosed by Yuen and represented in Fig. 2.

As to "splitting a certain service information table into sub-tables, wherein each sub-table identifies coincident local transport stream of a certain cell" Yuen discloses (col.6, lines 1-61) that the channel mapping information generated by the physical host is divided into multiple blocks, where each block includes a

channel map table (sub-table) for a specific zip code as represented in Figs. 5 and 6.

Yuen meets all the limitations of the claim except “the coincident local transport stream contains identification of adjacent transport streams of the coincident local transport stream, wherein said adjacent transport streams comprise transport streams of a at least one neighboring cell of said certain cell and distributing the sub-tables to an adjacent service provider of the coincident local transport stream.” However, Ikeda discloses (col.7, lines 52-62) that the system controller generates link information (mother table), where link information shows the program that is being broadcast in the service area and the programs that are being broadcast in adjacent service areas as represented in Fig. 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen’s system by creating a program table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 27**, “a method comprising: establishing service information configured to guide an end user terminal to discover transport streams” reads on delivering the channel mapping information (service information) table, established at the physical host, that includes channel maps

for all the television services offered by that physical host (col.3, lines 61-63; col.4, lines 19-26, 60-62) disclosed by Yuen and represented in Fig. 2.

As to "splitting the service information into sub-tables, wherein each sub-table identifies the transport stream of a certain cell and wherein the transport stream comprises a local transport stream of the certain cell, and the transport stream of the cell contains identification of transport streams of neighboring cells of the transport stream of certain cell" Yuen discloses (col.6, lines 1-61) that the channel mapping information generated by the physical host is divided into multiple blocks, where each block includes a channel map table (sub-table) for a specific zip code as represented in Figs. 5 and 6.

Yuen meets all the limitations of the claim except "wherein the transport stream comprises a local transport stream of the certain cell, and the transport stream of the cell contains identification of transport streams of neighboring cells of the transport stream of certain cell." However, Ikeda discloses (col.7, lines 52-62) that the system controller generates link information (mother table), where link information shows the program that is being broadcast in the service area and the programs that are being broadcast in adjacent service areas as represented in Fig. 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen's system by creating a program table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 28**, "a method comprising: receiving a broadcast transmission" reads on delivering the channel mapping information (service information) table, established at the physical host, that includes channel maps for all the television services offered by that physical host (col.3, lines 61-63; col.4, lines 19-26, 60-62) disclosed by Yuen and represented in Fig. 2.

As to "discovering a mother table from the broadcast transmission, the mother table announcing a set of sub-tables each sub-table identifying a local transport stream of certain cell, wherein the transport streams indicated in the mother table comprise adjacent transport streams to each other so that said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell" Yuen discloses (col.6, lines 1-61) that the channel mapping information generated by the physical host is divided into multiple blocks, where each block includes a channel map table (sub-table) for a specific zip code as represented in Figs. 5 and 6.

Yuen meets all the limitations of the claim except "discovering a mother table from the broadcast transmission, the mother table announcing a set of sub-tables each sub-table identifying a local transport stream of certain cell, wherein the transport streams indicated in the mother table comprise adjacent transport streams to each other so that said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell." However, Ikeda discloses (col.7, lines 52-62) that the system controller generates link information

(mother table), where link information shows the program that is being broadcast in the service area and the programs that are being broadcast in adjacent service areas as represented in Fig. 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen's system by creating a program table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 29**, "an apparatus comprising: means for receiving a broadcast transmission" reads on delivering the channel mapping information (service information) table, established at the physical host, that includes channel maps for all the television services offered by that physical host (col.3, lines 61-63; col.4, lines 19-26, 60-62) disclosed by Yuen and represented in Fig. 2.

As to "means for discovering a mother table from the broadcast transmission, the mother table announcing a set of sub-tables each sub-table identifying a local transport stream of a certain cell, wherein the transport streams indicated in the mother table comprise adjacent transport streams to each other so that said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell" Yuen discloses (col.6, lines 1-61) that the channel mapping information generated by the physical host is divided into multiple blocks, where each block includes a channel map table (sub-table) for a specific zip code as represented in Figs. 5 and 6.

Yuen meets all the limitations of the claim except "means for discovering a mother table from the broadcast transmission, the mother table announcing a set of sub-tables each sub-table identifying a local transport stream of a certain cell, wherein the transport streams indicated in the mother table comprise adjacent transport streams to each other so that said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell." However, Ikeda discloses (col.7, lines 52-62) that the system controller generates link information (mother table), where link information shows the program that is being broadcast in the service area and the programs that are being broadcast in adjacent service areas as represented in Fig. 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen's system by creating a program table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 31**, "the apparatus wherein the receiver comprises a wireless receiver for receiving the transport stream" Ikeda discloses (abstract and col.4, lines 46-49) that the transport stream is received by the mobile receiver. In addition, same motivation is used as to reject claim 29.

Regarding **claim 32**, "the apparatus wherein the end user terminal comprises a broadcast cellular mobile end user terminal" Ikeda discloses (abstract and col.4, lines 46-49) that the transport stream is received by the mobile receiver. In addition, same motivation is used as to reject claim 29.

Regarding **claim 40**, "the transmitter comprising: at least one head-end configured to establish at least one service information table for enabling an end user terminal to obtain the transport streams" reads on delivering the channel mapping information (service information) table, established at the physical host, that includes channel maps for all the television services offered by that physical host (col.3, lines 61-63; col.4, lines 19-26, 60-62) disclosed by Yuen and represented in Fig. 2.

As to "the at least one headend further configured to split the at least one service information table into sub-tables for establishing a mother table" Yuen discloses (col.6, lines 1-61) that the channel mapping information generated by the physical host is divided into multiple blocks, where each block includes a channel map table (sub-table) for a specific zip code as represented in Figs. 5 and 6.

Yuen meets all the limitations of the claim except "wherein each sub-table identifies a transport stream of a certain headend and wherein said transport stream comprises a local transport stream of a certain cell, and wherein the mother table identifies the transport stream of the certain headend and transport

streams of adjacent headends to the certain headend, wherein the transport streams of the adjacent headends comprise transport streams of neighboring cells of said certain cell." However, Ikeda discloses (col.7, lines 52-62) that the system controller generates link information (mother table), where link information shows the program that is being broadcast in the service area and the programs that are being broadcast in adjacent service areas as represented in Fig. 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen's system by creating a program table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

8. **Claims 2-5, and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuen in view of Ikeda as applied to claim 1 above, and further in view of EP Patent 0917355 A1 to Szucs et al (hereafter referenced as Szucs).

Regarding **claim 2**, "a method wherein the sub-table comprises a for loop of the at least one service information table" Yuen discloses (col.16, lines 38-48) that the channel scan occurs in loop as represented in Fig. 18. However, Szucs discloses (¶0024) that the service description table includes a service loop. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Yuen and Ikeda's systems by using a for loop

SI as taught by Szucs in order to repeatedly receive the table to know the sequencing of each table.

Regarding **claim 3**, "a method wherein the for loop comprises a section of the at least one service information table" Szucs discloses (§0024) that the event loop comprises event 1 and event 2 which is part of service description table. In addition, same motivation is used as rejection to claim 2.

Regarding **claim 4**, "a method wherein the for loop comprises a cycle of for loops of the at least one service information table" Szucs discloses (§0024) that the event loop comprises a checksum of a cyclic redundancy check CRC. In addition, same motivation is used as rejection to claim 2.

Regarding **claim 5**, "a method wherein the for loop comprises a transport stream identifier for uniquely identifying the certain transport stream of the sub-table" Szucs discloses (§0024) that the newly generated transport stream includes newly generated section header data, to identify the stream, and newly generated transmission information loop. In addition, same motivation is used as rejection to claim 2.

Regarding **claim 8**, "a method wherein at least one the service information table comprises a Bouquet Association Table" Szucs discloses (§0019) that the

transport stream analyzer analyzes program association table which is a part of service information. In addition, same motivation is used as rejection to claim 2.

9. **Claims 13, 14, 23, and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuen in view of Ikeda as applied to claim 1 above, and further in view of US Patent 6,401,242 to Eyer et al (hereafter referenced as Eyer).

Regarding **claim 13**, "a method further comprising the step of re-transmitting the sub-table to the adjacent transport streams" Ikeda discloses (col.4, lines 33-38; col.7, lines 52-62) that the system controller controls the operation of each transmitter by generating link information of service areas based on the location of receiver. However, combination of Yuen and Ikeda does not explicitly teach that the table is re-transmitted. Eyer discloses (col.20, lines 54-64) that the tables from region one and two are transmitted and combined together to carry the schedules/listings. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen and Ikeda's systems by transmitting table as taught by Eyer in order to allow the communication of scheduling information for television programming and also to be economical in terms of communication bandwidth (col.2, lines 61-62).

Regarding **claim 14**, "a method wherein the step of re-transmitting comprises individual re-transmitting" Eyer discloses (col.21, lines 8-12) that when

a new data bundle transmitted, it's added to the bundle memory. In addition, same motivation is used as to reject claim 13.

Regarding **claim 23**, "a method wherein the transport stream comprises multicast" Eyer discloses (col.5, lines 4-5) that the channel map data is multicast addressed to decoders. In addition, same motivation is used as to reject claim 13.

Regarding **claim 30**, "the apparatus further comprising means for interaction with a service provider providing the transport stream" Eyer discloses (col.4, lines 64-68) that the channel map data table received from broadcast network provider is provided to receiver and receiver communicate with head-end by entering a channel number. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen and Ikeda's systems by transmitting table as taught by Eyer in order to allow the communication of scheduling information for television programming and also to be economical in terms of communication bandwidth (col.2, lines 61-62).

10. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuen in view of Ikeda and Eyer as applied to claim 13 above, and further in view of US Patent 5,671,219 to Jensen et al (hereafter referenced as Jensen).

Regarding **claim 15**, combination of Yuen, Ikeda and Eyer meets all the limitations of the claim except "a method wherein the step of re-transmitting comprises periodic re-transmitting." However, Jensen discloses (col.13, lines 45-50) that each user station periodically receives air channel in sequence. Therefore, it would have been obvious to one ordinary skills in the art at the time of the invention to transmit stream/channel periodically as taught by Jensen in order to maintain or establish communication path between user device and cell/tower (col.1, lines 25-26).

11. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuen in view of Ikeda and Eyer as applied to claim 13 above, and further in view of Szucs.

Regarding **claim 16**, combination of Yuen, Ikeda and Eyer meets all the limitations of the claim except "a method wherein the sub-table is adapted to be retransmitted without any further modification of the sub-table." However, Szucs discloses (§0028) that when streams are being passed onto network, the program map table is also being transmitted through without any modification. Therefore, it would have been obvious to one of the ordinary skills in the art at the time of the invention to modify Yuen, Ikeda and Eyer's systems by transmitting sub-table without modification as taught by Szucs in order to transmit only those channels that belongs to the specific areas.

12. **Claims 24 and 41-44** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuen in view of Ikeda as applied to claim 1 above, and further in view of US Patent 6,965,770 B2 to Walsh et al (hereafter referenced as Walsh).

Regarding **claim 24**, combination of Yuen and Ikeda meets all the limitations of the claim except "a method wherein the transport stream comprises unicast." However, Walsh discloses (col.3, line 7-9 and abstract) that the unicast network is used for transmitting content to end user terminal. Therefore, it would have been obvious to one ordinary skills in the art at the time of the invention to use streams with unicast as taught by Walsh in order to universally routed data across the Network which allows Network to run between two known endpoints.

Regarding **claim 41**, "a computer-readable medium having computer executable instructions that, when executed, cause a computer to perform a method comprising: establishing at least one service information table configured to enable an end user terminal to obtain the transport streams configured to be transmitted by a digital broadcast network" reads on delivering the channel mapping information (service information) table, established at the physical host, that includes channel maps for all the television services offered by that physical host (col.3, lines 61-63; col.4, lines 19-26, 60-62) disclosed by Yuen and represented in Fig. 2.

As to "splitting the at least one service information table into sub-tables, wherein each sub-table identifies a certain transport stream, and wherein said

transport stream comprises a local transport stream of a certain cell" Yuen discloses (col.6, lines 1-61) that the channel mapping information generated by the physical host is divided into multiple blocks, where each block includes a channel map table (sub-table) for a specific zip code as represented in Figs. 5 and 6.

Yuen meets all the limitations of the claim except "establishing a mother table configured to maintain a sub-table of the certain transport stream and sub-tables of adjacent transport streams of the certain transport stream, wherein said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell." However, Ikeda discloses (col.7, lines 52-62) that the system controller generates link information (mother table), where link information shows the program that is being broadcast in the service area and the programs that are being broadcast in adjacent service areas as represented in Fig. 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Yuen's system by creating a program table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Combination of Yuen and Ikeda meets all the limitations of the claim except "a computer-readable medium having computer-executable instructions." However, Walsh discloses (col.2, lines 27-36) that the content device includes a memory for storing computer readable instructions that executed by processor on

the computer device. Therefore, it would have been obvious to one ordinary skills in the art at the time of the invention to write and execute a program on computer medium as taught by Walsh in order to efficiently use the computer program to do the above-mentioned operations and also it would have yielded a predictable result to one ordinary skilled in the art.

Regarding **claim 42**, "the computer-readable medium wherein the computer executable instructions, when executed, cause the computer to build a local table based on the sub-table of the certain transport stream" Ikeda discloses (col.5, lines 27-32) that the transmitter transmits service list of the programs offered in the service area. In addition, same motivation is used as to reject claim 41.

Regarding **claim 43**, "the computer-readable medium wherein the computer executable instructions, when executed, cause the computer perform a handover function for the transport streams when a mobile end user terminal is moving from a cell of the certain transport stream to any adjacent transport stream" Ikeda discloses (col.4, lines 33-38) that when the receiver moves from one service area to another service area, broadcasting being transmitted is switched from one transmitter to another as represented in Fig. 1. In addition, same motivation is used as to reject claim 41.

Regarding **claim 44**, "the computer-readable medium wherein the computer executable instructions, when executed, cause the computer perform a roaming function for the transport streams when a mobile end user terminal is moving from a cell of the certain transport stream to any adjacent transport stream" Ikeda discloses (col.4, lines 33-38) that when the receiver moves from one service area to another service area, broadcasting being transmitted is switched from one transmitter to another to maintain communication as represented in Fig. 1. In addition, same motivation is used as to reject claim 41.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pinkal R. Chokshi whose telephone number is (571) 270-3317. The examiner can normally be reached on Monday-Friday 8 - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian T. Pendleton can be reached on 571-272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Pinkal R. Chokshi/
Examiner, Art Unit 2425

/Brian T. Pendleton/
Supervisory Patent Examiner, Art Unit 2425